

Draft
Bundles of Early Implementation Actions
(Pre-ROD and Early Stage 1)
March 11, 1999

Introduction

The CALFED Bay-Delta Program was established to solve problems in ecosystem quality, water quality, water supply reliability, and levee and channel integrity. The Program seeks to do this by developing a long-term comprehensive plan that will restore ecological health and improve water supply reliability for beneficial uses of the Bay-Delta System. The Program has crafted alternatives that improve water quality so as to protect Delta drinking water supplies and improve the quality of aquatic habitat. Maintaining and improving the integrity of Delta levees and channels will protect agricultural, urban, and environmental uses within the Delta and protect the quality of water uses elsewhere in the state. Water conservation and recycling programs can assure the efficient use of existing water supplies and any new supplies developed through the Program.

In Phase III, following completion of the Final Programmatic EIR/EIS, implementation will begin. This period will include site-specific environmental review and permitting, as necessary. Because of the size and complexity of any of the alternatives, implementation is likely to take place over a period of decades.

The first stage of Program implementation is critical to its long-term success because it will serve as an indication of the CALFED agencies and stakeholder community capacity to act on a cost-effective, practical, and equitable set of actions which advance the Program objectives. In order to move expeditiously into Program implementation after completion of the Programmatic EIR/EIS and the Record of Decision, it is necessary to begin now to define the earliest, high priority actions, their funding requirements and sources, implementing entities, and detailed implementation plans for each action. This draft paper is intended to open a broad discussion of these issues and to elicit input from all interested participants in the CALFED process. As the action priorities are reviewed, refined, and evaluated in more detail, they will serve to guide funding priorities, formulation of cost estimates, resource planning, and implementation activities of CALFED participating agencies.

Priority Actions

Based on discussions with CALFED Program Managers, proposed high priority actions have been identified for implementation prior to or shortly after the completion of Phase

forward together as intended. A wide range of linkage mechanisms may be applied, including contracts, inter-agency agreements, legislation (including bond acts), and individual agency funding commitments.

The 7 bundles are described below, in no particular order of priority:

Lower San Joaquin River and South Delta Region Bundle

This bundle is designed to address the regional concerns regarding south Delta and lower San Joaquin River and south Delta fisheries, water quality, water supply reliability, recreation, flood control, and wildlife habitat. The proposed actions are designed to conduct feasibility and environmental evaluations and implement corrective actions in the region as well as in upstream watersheds which affect the quality and quantity of flows in the San Joaquin River.

Lower Sacramento River, North Delta Bundle

This bundle is designed to develop an balanced solution to concerns surrounding fishery and water quality impacts of diversions from the Sacramento River into the central Delta, to address regional flood concerns, and to substantially enhance riparian and wetlands habitat corridors in the region.

Yolo Bypass, Suisun Marsh, and West Delta Bundle

This bundle is designed to address group water quality, fisheries protection, and habitat enhancement actions for the west Delta region, including Suisun Marsh, the west Delta islands, and the Yolo Bypass. Because expansion of wetlands in the Yolo Bypass area could exacerbate the potential toxicity effects of mercury originating in the Cache Creek basin, this bundle includes substantial research to identify those sources and potential remediation tools.

Delta-Wide ERP/Levees Bundle

This bundle is designed to achieve a reasonable balance between implementation of ecosystem improvement actions and levee system improvement actions. In addition this bundle includes actions to improve fisheries, water quality, and habitat throughout the Delta, including protection and enhancement of Delta in-channel islands.

Table 1. Draft Early Implementation Bundles

Action Description	Detail/Assumptions	Primary Effects	CALFED Program	Secondary CALFED Program	Implementing Entity	Implementing Authority Required?
2 Lower San Joaquin River and South Delta Region Bundle						
3 Plan, Design & Construct CVP Tracy Fish Facility, First Stage Module, 2500 cfs screen, plus Sorting, Holding, Transport, and Release	New fish screens for TPP full export capacity to be completed by end of Stage 1	Improve fish survival	S/C	ERP	USBR *	
4 Plan, Design, & Construct:Process for SWP Export Capacity to 10,300 cfs: New Screened Intake with Gates and LH Pumps, Head of Old River and Ag Barriers or Functional Equivalent, Channel Enlargement as Reqd. Potential Selected Channel Improvements, Signage, and Access for Recreation	Interim increase to 8500 cfs export capacity may be sought if benefits justify	Improve fish survival, water supply flex. and reliability, drinking water quality stages, circulation, and water quality	S/C	ERP	DWR,USBR	
5 Implement the Proposed Vermalis Adaptive Management Plan (VAMP) Agreement	Manage San Joaquin River flows, Delta exports, conduct fishery studies, evaluate benefits and impacts	Improve salmon survival, cu/gw management u/s, improve understanding of fish vs flow		ERP	USBR, DWR, and SJRGA	
6 Vieale Tract Drainage Discharge Relocation Feasibility Study and Environmental Documentation	Possible cost share with Contra Costa Water District.	Improve drinking water	WQ			
7 Evaluate/Implement as Appropriate Release of TDS Buildup during High Flow Periods		Improve late season WQ in lower San Joaquin River, potential drinking water quality impact	WQ: not yet listed		Local Water Distr. w/ grant assistance	
8 Feasibility Study: Evaluate Recirculation Benefits and Impacts		Potential to improve water quality and meet VAMP flow requirements in lower San Joaquin River	S/C	ERP, WQ	DWR,USBR	
9 Study: Investigate Dissolved Oxygen Causes and Solutions for Lower San Joaquin River and begin implementation	Refine and implement real-time management of discharges	Find ways to improve WQ in San Joaquin River in vicinity of Stockton	WQ	ERP	Multi-Agency: RWQCB lead	
10 Pilot Studies, Selenium: Integrated On-Farm Management	On farm selenium control management practices.	Evaluate techniques for reducing Se drainage	WQ	ERP	Grasslands Water District	

1 Action Description	Detail/Assumptions	Primary Effects	CALFED Program	Secondary CALFED Program	Implementing Entity	Implementing Authority Required?
12 Lower Sacramento River, North Delta Bundle						
13 Restore Tidal Marsh and Riparian Habitats along Georgiana Slough	The assumption is that improved habitat will decrease the diversion effect on fisheries.	Improve fisheries and wildlife habitat	ERP			
14 Feasibility Study: Lower Mokelumne River channels dredging and limited levee setbacks, Modify/raise levees in selected reaches	Investigate the feasibility of offsetting impacts to fisheries which may result from this action	Flood control and habitat creation w/ levee berms	S/C	ERP	DWR	
15 Acquire and Convert Land for Shallow Water, Wetland, and Riparian Habitat	This action will contribute to establishment of a Mokelumne River Corridor.	Flood control and habitat creation w/ breached levees	ERP: Mokelumne Corridor		DWR, DFG, and others	
16 Study Feasibility of Delta Cross Channel Reop and 2-4K cfs Hood Diversion		Balance water quality and fisheries benefits, potential for improved drinking water quality	S/C	ERP, WQ	DWR	

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Action Description	Detail/Assumptions	Primary Effects	CALFED Program	Secondary CALFED Program	Implementing Entity	Implementing Authority Required?
26 Delta Wide ERP/Levees Bundle						
27 Levees Subventions	Levee System Integrity	Levees		DWR, Corps		
					Congressional authorization may be required for Corps participation with Non-Project Levees	
28 Levees Special Projects	Levee System Integrity	Levees			DWR	
29 Emergency Response Program	Levee System Integrity	Levees			DWR	
30 Identify Risks to Delta Levees and Develop a Risk Management Strategy	Levee System Integrity	Levees		WQ, ERP, Conveyance	CALFED	
31 Evaluate the Need to Screen Small Diversions in the Delta and Implement	Reduce fisheries entrainment impacts	ERP			DFG, DWR	
32 Nonnative Invasive Species (NIS) (Note: Expand to actions in SF Bay and Suisun Marsh, to reduce further invasions and eradication of <i>Lepidium</i>)	Demonstration projects. This action is part of an ecosystem-wide effort to control non-native invasive species with early emphasis on the Delta and the Bay.	ERP			USFWS	
33 Total Organic Carbon Evaluation	General Evaluation and Pilot Study: Total Organic Carbon Reduction, DWR to do engineering and technical oversight.			WQ/ERP	DWR, Local RD	
34 ERP Levee Relocations, Berms, Veg. Management	Cost included with In-Channel Island Restoration	Delta Shallow Water, tidal wetlands, and riparian habitat	ERP		DWR, DFG	
35 In-Channel Islands Restoration		Tidal wetlands, riparian habitat, special status species	ERP		DWR, DFG	
36 Assessment of sources and	Includes TOC, nutrients, salinity.			WQ		
37 Determine Key Acquisition Areas for Conservation of Special Status Plant Species in the Delta, Suisun Marsh, and S.F. Bay				ERP		
38 Studies to Determine Propagation Techniques and Restoration Protocols of Rare Plants in the Delta, Suisun Marsh, and S.F. Bay				ERP		

Action Description	Detail/Assumptions	Primary Effects	CALFED Program	Secondary CALFED Program	Implementing Entity	Implementing Authority Required?
52 San Joaquin River Meander Corridor & Tribs Study, Implementation, and Acquisition		ERP		DWR, Corps		

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Action Description	Detail/Assumptions	Primary Effects	CALFED Program	Secondary CALFED Program	Implementing Entity	Implementing Authority Required?
65 In-Delta and Adjacent to Delta Storage: Feasibility Study		Improve Storage/CU utility	S/C		DWR	
66 Power Facilities Reop. For Water Supply Study		Improve Storage/CU utility	S/C	ERP	DWR, FERC, PUC, SWRCB	
67 Overall Storage Strategy		Improve Storage/CU utility	S/C	ERP	CALFED	
68 Fish Migration Barrier Removal Prioritization and Evaluations			S/C			
69 Financial Incentive Program	Local assistance (loans & grants) for cost effective water conservation/recycling actions, Low interest loans	reduce Demand	WUE			
70	Urban		WUE		CALFED, Multi-agency	
71	Ag		WUE		CALFED, Multi-agency	
72	Managed Wetlands		WUE		CALFED, Multi-agency	
73	Recycling		WUE		CALFED, Multi-agency	
74 Technical Assistance	Recoverable loss studies, on-farm conservation studies, funded through member agencies (USBR, DWR)	reduce Demand	WUE			
75	Urban		WUE		CALFED, Multi-agency	
76	Ag		WUE		CALFED, Multi-agency	
77	Refuges or Managed Wetlands		WUE		CALFED, Multi-agency	
78	Recycling		WUE		CALFED, Multi-agency	
79 Directed Studies			WUE			
80	Research ET		WUE		DWR, UC	
81	Pilot Measurement Program		WUE		CALFED, Multi-agency	
82 Establish water transfer clearinghouse	Features of Clearinghouse in 2000/01; develop website to disseminate transfer information and approval process requirements. No user fees. Possibly house in new division of SWRCB.	Imp. Market efficiency	WT		CALFED	

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Action Description	Detail/Assumptions	Primary Effects	CALFED Program	Secondary CALFED Program	Implementing Entity	Implementing Authority Required?
95 Fund and implement watershed restoration, maintenance, conservation, and monitoring activities.	Assist local watershed groups and government agencies to address common issues on a community basis through grants, directed actions, and technical support.	Manage land use, vegetation, and stream zones to reduce sediment, reduce stream flashiness, improve base flow, Reduce fire danger, reduce pathogens, and TDS	WM	ERP	CALFED	
96 Field Surveys for all special status species in and around all potential surface storage and groundwater sites						

List of Abbreviations

Ag	Agricultural
BMP	Best Management Practices
Br	Bromide
CCFB	Clifton Court Forebay
CMARP	Comprehensive Monitoring, Assessment, and Research Program
Corps	U.S. Army Corps of Engineers
cu/gw	Conjunctive use/groundwater
CVP	Central Valley Project
DFG	Department of Fish and Game
DWR	Department of Water Resources
Eco	Ecosystem
Env.	Environmental
ERP	CALFED Ecosystem Restoration Program
ET	Evapotranspiration
External	Related action, not part of the CALFED Program
FY	Fiscal Year (assumed to be federal in this document)
Hg	Mercury
ID	Identify
Imp.	Improve
Levees	CALFED Levee System Integrity Program
LH	Low Head
RD	Reclamation District
RWQCB	Regional Water Quality Control Board
S/C	CALFED Storage and Conveyance Programs
Se	Selenium
SJRGAs	San Joaquin River Group Authority
SWP	State Water Project
SWRCB	State Water Resources Control Board
TDS	Total Dissolved Solids, mg/l
TOC	Total Organic Carbon
USBR	U.S. Bureau of Reclamation
USFWS	U.S. Fish and Wildlife Service
VAMP	Vernalis Adaptive Management Program
w/	with
WM	CALFED Watershed Management Program
WQ	CALFED Water Quality Program Elements
WT	CALFED Water Transfer Program Elements
WUE	CALFED Water Use Efficiency Program